

Remarks

In the Office Action of 28 February 2008, Claims 1-24 were pending with no claims yet allowed. In the current Response, no claims are amended. Applicant respectfully requests favorable reconsideration for the reasons below.

35 U.S.C. § 112 Rejections

Written Description

Claims 1-24 were rejected under §112, first paragraph, for allegedly failing to comply with the written description requirement. In particular, the Office stated that:

- 1) Claim 1: “actively adjusting the reducing environment such that SO₃ is reduced to SO₂ prior to selective catalytic reduction to achieve a desirable level of SO₃ for optimizing precipitator function”;
- 2) Claim 9: “actively adjusting the reducing environment such that SO₃ is reduced to SO₂ to achieve a desirable level of SO₃ for optimizing precipitator function”; and
- 3) Claim 17: “actively adjusting the reducing environment time period such that SO₃ is preferentially reduced to SO₂ to achieve a desirable level of SO₃ for optimizing precipitator function”

are not described in the specification, in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention. Applicant respectfully disagrees.

MPEP 2163.04 provides that “the examiner has the initial burden of presenting by a preponderance of the evidence why a person skilled in the art would not recognize in an applicant’s disclosure a description of the invention defined by the claims”. Applicant respectfully requests that the Office reconsider whether it has met this burden.

Applicant’s specification, as filed, describes numerous methods of *actively adjusting the reducing environment* (see, for example, page 9 of the application as filed) and describes levels of *SO₃ desirable for optimizing precipitator function* (see, for example, page 11, lines 4-6 discussing ESP function). In short, the record discloses structure, physical and chemical

properties, and functional characteristics, according to the invention. Thus, Applicant respectfully believes the record specifically shows that Applicant was in possession of the claimed invention at the time of filing.

Enablement

Claims 1-24 were rejected under §112, first paragraph, for allegedly failing to comply with the enablement requirement. In particular, the Office states that:

- 1) Claim 1: "actively adjusting the reducing environment such that SO₃ is reduced to SO₂ prior to selective catalytic reduction to achieve a desirable level of SO₃ for optimizing precipitator function";
- 2) Claim 9: "actively adjusting the reducing environment such that SO₃ is reduced to SO₂ to achieve a desirable level of SO₃ for optimizing precipitator function"; and
- 3) Claim 17: "actively adjusting the reducing environment time period such that SO₃ is preferentially reduced to SO₂ to achieve a desirable level of SO₃ for optimizing precipitator function"

are not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant respectfully requests that the Office reconsider whether it has made a *prima facie* case that the instant invention is not enabled.

MPEP 2164.04 provides that:

- (1) The examiner has the initial burden to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993);
- (2) The Examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure;

(3) It is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain *why* it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning that is inconsistent with the contested statement. Otherwise, there would be no need for the applicant to go to the trouble and expense of supporting his presumptively accurate disclosure." *In re Marzocchi*, 439 F.2d at 224, 169 USPQ at 370. (bolding added); and

(4) To object to a specification on the grounds that the disclosure is not enabling with respect to the scope of a claim sought to be patented, the examiner must provide evidence or technical reasoning substantiating those doubts. (see also USPTO Examiner Training Materials for § 112 at <http://www.uspto.gov/web/offices/pac/dapp/1pecba.htm>)(bolding added)

Applicant respectfully requests that the Office provide evidence or technical reasoning substantiating its doubts that Applicant's invention is not enabling to allow Applicant to better respond to the rejection.

In its current Office Action, the Office stated that the Declaration of Mark Schilling "is not persuasive as it is the opinion of an interested party which is not supported by facts, such as test data". Applicant respectfully notes that the application itself contains test data (see e.g., the Examples on page 13). MPEP 2164.02 provides that a "single working example in the specification for a claimed invention is enough to preclude a rejection which states that nothing is enabled since at least that embodiment would be enabled".

Again, the specification as filed:

(1) Discloses that precipitator function is optimized at SO₃ levels at 15 to 20 parts per million (ppm) in flue gas (page 2, lines 15-18);

(2) Discloses seven methods of increasing the residence time for actively adjusting the reducing environment such that SO₃ is reduced to SO₂, and discloses four methods of increasing the reducing potential in the flue gas for actively adjusting the reducing environment such that SO₃ is reduced to SO₂ (page 9, lines 5-17); and

(3) Contains Examples showing (i) acceptable ratios of SO₃ to SO₂ at different staging depths to achieve embodiments of the present invention and (ii) % SO₃ reduction achievable thereby.

Applicant notes that *adjusting* may be performed relative to normal or existing operating conditions at a given furnace. As such, efficacious values could readily be determined by one of ordinary skill in the art at the time of the invention based on existing operating conditions at a given furnace. If the Office disagrees, Applicant respectfully requests elaboration as to why in order to better respond to the Examiner's concerns.

35 U.S.C. §103

Claims 9-16

Claims 9-16 were rejected as unpatentable under §103(a) in light of the combination of Kindig, Wright, and Carver. Applicant requests favorable reconsideration for any of the reasons below.

Applicant believes Kindig fails to disclose or suggest “adjusting the reducing environment such that SO₃ is reduced to SO₂ to achieve a desirable level of SO₂” as recited by Claim 9. Applicant respectfully submits that, in contrast to the instantly claimed invention, to the extent Kindig adjusts the reducing environment, it is only to increase the “reaction of sulfur dioxide to sulfur trioxide” (see, for example, the Abstract showing using specific coal, a sulfur sorbent, a sulfation promoter, and a catalyst for the reaction of sulfur dioxide to sulfur trioxide”). Applicant respectfully submits that neither Wright nor Carver is able to fill the above mentioned voids.

Regarding Carver, the Office stated that “Carver et al. teaches actively adjusting, effectuate an overall decrease in SO₃ concentration.” Applicant respectfully notes that the recited limitation in Claim 9 is “actively adjusting *the reducing environment such that SO₃ is reduced to SO₂*. To the extent that Carver discloses *actively adjusting*, Applicant was unable to locate any disclosure of the recited limitation.

For at least any of the above reasons, Applicant respectfully requests favorable reconsideration of Claim 9 and the claims depending therefrom.

Claims 1-3, 8-11, 16-19 and 24

Claims 1-3, 8, 9-11, 16, 17-19 and 24 were rejected under §103 as unpatentable over Carver in view of Fan and Wright. Applicant respectfully believes that the Office's combination fails to disclose or suggest, *inter alia*, *actively adjusting the reducing environment such that SO₃ is reduced to SO₂ to effectuate an overall decrease in SO₃ concentration prior to selective catalytic reduction to achieve a desirable level of SO₃ for optimizing precipitator function.*

By way of example, the Office contends that Carver discloses "actively adjusting the reducing environment such that SO₃ is reduced to SO₂ to effectuate an overall decrease in SO₃ concentration prior to...to achieve a desirable level of SO₃". Applicant was unable to locate any disclosure in Carver that relative SO₃/SO₂ concentration was a measured parameter. Further, Applicant was unable to locate any disclosure that Carver is actively adjusting the reducing environment to achieve a desirable level of SO₃. Applicant respectfully requests that the Office point with more particularity to these disclosures in Carver.

The Office also stated that "Wright teaches for optimizing precipitator function (col. 1, lines 27-61). Wright, however, discloses injecting a conditioning agent, e.g., sulfur, which is then combusted to create a gas stream of sulfur trioxide (see, e.g., col. 4, line 61- col. 5, line 1). In short, Wright uses a different technique in an attempt to achieve a superficially similar result. Applicant respectfully believes that Fan is unable to fill this void.

Claims 4-7, 12-15 and 20-23

Claims 4-7, 12-15 and 20-23 were rejected as obvious in light of the combination of Carver, Fan and Kindig. The rejection of Claims 4-7, 12-15 and 20-23 is deemed moot in light of the amendments to independent Claims 1, 9 and 17, from which the claims at issue depend.

Conclusion

By this amendment, Applicant submits that he has placed the case in condition for immediate allowance and such action is respectfully requested. However, if any issue remains

unresolved, Applicant's attorney would welcome the opportunity for a telephone interview to expedite allowance and issue.

Respectfully submitted,


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